

REMARKS/ARGUMENTS

Claims 1, 3-18 and 26-31 are pending in this application. By this Amendment, claims 1, 10 and 12-18 are amended, claims 26-31 are added, and claims 19-25 are cancelled without prejudice or disclaimer. Support for the claims can be found throughout the specification, including the original claims and the drawings. Withdrawal of the rejections in view of the above amendments and the following remarks is respectfully requested.

I. Rejections Under 35 U.S.C. §103(a)

Claims 1, 3-4, 6-8, 19-22, and 24-25 are rejected under 35 U.S.C. §103(a) over Irube et al., U.S. Patent Publication No. 2001/0041586 (hereinafter “Irube”), in view of Rossi, U.S. Patent No. 5,672,820 (hereinafter “Rossi”) and further in view of Berstis, U.S. Patent No. 6,542,824 and Tullis, U.S. Patent No. 6,535,243. Claims 19-22, 24 and 25 have been cancelled. The rejection, in so far as it applies to claims 1, 3, 4 and 6-8, is respectfully traversed.

Independent claim 1 recites, *inter alia*, a direction sensor configured to detect compass orientation direction data associated with a photographing object, a voice/image communication apparatus configured to multiplex or demultiplex the direction data and at least one of converted voice or image data, and a display module configured to display demultiplexed image and direction data from the voice/image communication apparatus, wherein the direction data is displayed within the image which is captured by the apparatus and displayed by the display module. Independent claim 1 also recites a control unit configured to control the codec, camera module, voice/image communication apparatus, and display module, wherein the control unit

checks whether a direction displaying mode has been selected and controls the display module to display the demultiplexed image data and the direction data simultaneously when the direction display mode is selected. Irube, Rossi, Berstis and Tullis, either alone or in combination, neither disclose nor suggest such features, or the claimed combination of features.

As set forth in previous replies, the camera direction sensor unit 28 disclosed by Irube merely senses the presence of a camera unit 4, i.e., whether or not the camera unit 4 is actually attached to the terminal 1 or not. Irube neither discloses nor suggests that the camera direction sensor unit 28 is capable of detecting anything other than the presence of the camera unit 4, let alone that the camera direction sensor unit 28 has the capabilities of the claimed direction sensor. Further, because the sensor unit 28 is not capable of collecting and providing the claimed direction data, Irube necessarily neither discloses nor suggests a voice/image communication apparatus configured to multiplex/demultiplex such data. Further, the two multiplexer/demultiplexers 17 and 20 cannot multiplex/demultiplex voice, video, and direction or other data, as does the claimed voice/image communication apparatus. Additionally, Irube neither discloses nor suggests the claimed display module.

As set forth in previous replies, Rossi fails to overcome the deficiencies of Irube. Rossi's object location identification system 10 measures and outputs heading and depression angle data associated with a pointing device 16 to ultimately generate latitude, longitude and altitude data corresponding to the user's (of the pointing device 16) location. Rossi neither discloses nor suggests the claimed direction sensor. Further, even a combination of the teachings of Irube and

Rossi does not disclose or suggest a direction sensor as recited in independent claim 1. However, even if such a combination were to suggest the claimed direction sensor, none of the components of the system 10 are configured to multiplex or demultiplex direction data and at least one of converted voice or image data, nor does Rossi disclose or suggest a display module configured to display any such demultiplexed data.

As set forth in previous replies, Berstis fails to overcome the deficiencies of Irube and Rossi. That is, the position data generated by Berstis' inertial sensors 16 is not necessarily representative of an actual position of a photographed object itself, and is inaccurate if the photographing device 10 has been moved without storing an updated reference position. Further, incorporation of the inertial sensors 16 disclosed by Berstis with the teachings of Irube and/or Rossi would still not disclose or suggest the claimed direction sensor. That is, any type of position or direction data collected by the inertial sensors 16 still only reflect a position of the object relative to a current position of the device 10.

As set forth in previous replies, Tullis is merely cited as allegedly teaching the use of transceivers and speakers. Thus, Tullis fails to overcome the deficiencies of Irube, Rossi and Berstis.

Additionally, neither Irube nor Rossi nor Berstis nor Tullis discloses or suggests any type of controller that can check whether a direction displaying mode has been selected, and that can control a display module to display demultiplexed image and direction data simultaneously if the direction displaying mode has been selected, as recited in independent claim 1. The Office

Action asserts that U.S. Patent No. 6,236,940 to Rudow et al. (hereinafter “Rudow”) teaches the capabilities of the control unit as now recited in independent claim 1. Applicant respectfully disagrees.

Rudow discloses a display for a golf cart that displays a color map of each hole of the golf course. The position of the car is represented by a symbol on the map, and yardage to the hole is displayed adjacent to the map. Rudow’s device always displays the map, golf cart position and orientation symbol, and yardage to the hole, and the user is not afforded the opportunity to view only the map image if so desired.

In contrast, the terminal recited in independent claim 1 includes a control unit that checks whether a direction display mode has been selected. Because image and direction data are demultiplexed, the control unit can then control the display module so that both the image data and the direction data are displayed simultaneously if the direction display mode has been selected. If the direction display mode has not been selected, then the control unit can control the display module so that only the image data is displayed. Rudow neither discloses nor suggests that the golf cart display can be manipulated to display only one of the three components (map, golf cart position, yardage to the hole) on the display.

Additionally, it is respectfully submitted that there would have been no motivation to combine Irube, Rossi, Berstis and Tullis (and/or Rudow) in the manner suggested in the Office Action to arrive at the apparatus as recited in independent claim 1. Applicant maintains the

position that the piecemeal reconstruction of the invention through the combination of these multiple references relies on impermissible hindsight gleaned from Applicant's own disclosure.

For all of the above reasons, it is respectfully submitted that independent claim 1 is allowable over the applied combination, and thus the rejection of independent claim 1 under 35 U.S.C. §103(a) over Irube, Rossi, Berstis and Tullis should be withdrawn. Dependent claims 3, 4 and 6-8 are allowable at least for the reasons set forth above with respect to independent claim 1, from which they depend, as well as for their added features.

Claims 5, 10 and 12-18 are rejected under 35 U.S.C. §103(a) over Irube, Rossi, Berstis, Tullis in view of Rudow. The rejection is respectfully traversed.

Independent claim 10 recites demultiplexing the image data and separating the image frame into at least one of image, voice, or compass orientation direction data. Independent claim 10 also recites checking the demultiplexed data for a setting of a direction displaying mode from a direction displaying processing unit, and determining a position and a method for displaying the image and compass orientation direction data on the screen of the display from the direction displaying processing unit if the direction displaying mode is set. Independent claim 10 then recites displaying the separated image and compass orientation direction data simultaneously on a screen of a display in the determined position and determined method. As set forth above, Irube, Rossi, Berstis, Tullis and Rudow, either alone or in combination, neither disclose nor suggest such features.

Additionally, it is respectfully submitted that there would have been no motivation to combine the Irube, Rossi, Berstis, Tullis and Rudow references in the manner suggested in the Office Action to arrive at the method as recited in independent claim 10. Applicant maintains the position that the piecemeal reconstruction of the invention through the combination of five different references, Irube, Rossi, Berstis, Tullis and Rudow, relies on impermissible hindsight gleaned from applicant's own disclosure.

For at least these reasons, it is respectfully submitted that independent claim 10 is allowable over the applied combination, and thus the rejection of independent claim 10 under 35 U.S.C. §103(a) over Irube, Rossi, Berstis, Tullis and Rudow should be withdrawn. Dependent claims 12-18 are allowable at least for the reasons set forth above with respect to independent claim 10, from which they respectively depend, as well as for their added features.

Likewise, dependent claim 5 is allowable over Irube, Rossi, Berstis and Tullis at least for the reasons set forth above with respect to independent claim 1, from which it depends, as well as for its added features. Further, as set forth above, Rudow fails to overcome the deficiencies of Irube, Rossi, and Berstis. Accordingly, it is respectfully submitted that claim 5 is allowable over the applied combination, and thus the rejection of claim 5 under 35 U.S.C. §103(a) over Irube, Rossi, Berstis, Tullis and Rudow should be withdrawn.

Claims 9, 11, and 23 are rejected under 35 U.S.C. §103(a) over Irube in view of Rossi, Berstis and Tullis and further in view of Takahaski et al., U.S. Patent No. 6,516,094 (hereinafter

“Takahashi”). Claim 23 has been cancelled. The rejection, in so far as it applies to claims 9 and 11, is respectfully traversed.

Dependent claims 9 and 11 are allowable over Irube, Rossi, Berstis and Tullis at least for the reasons set forth above with respect to independent claims 1 and 10, from which they respectively depend, as well as for their added features. Further, Takahashi is merely cited as allegedly teaching formation of null data, and thus fails to overcome the deficiencies of Irube, Rossi, Berstis and Tullis. Accordingly, it is respectfully submitted that claims 9 and 11 are allowable over the applied combination, and thus the rejection of claims 9 and 11 under 35 U.S.C. §103(a) over Irube, Rossi, Berstis and Tullis should be withdrawn.

II. New Claims 26-31

New claims 26-31 are added to the application. It is respectfully submitted that new claims 26-31 also define over the applied prior art references and meet the requirements of 35 U.S.C. §112.

III. Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned **Joanna K. Mason**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,

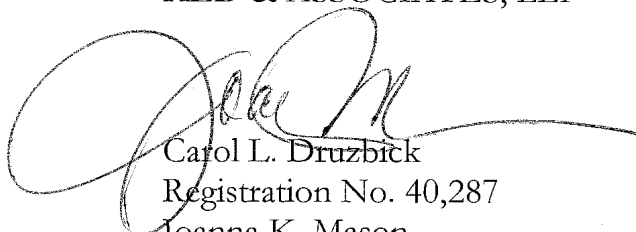
Serial No. **09/996,713**

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Reply to Office Action of April 3, 2007

concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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